

Internal use 496468

Application for a Grant

Identification						
This page will be made available to selection committee members and external assessors.						
Funding opportunity Insight Grants						
Joint or special initiative						
Application title Exploring and transforming a cultural imaginary of energy development in Canada						
Applicant family name Parkins			Applicant given name John		Initials R	
Org. code 1480111	Full name of applicant's organization and department University of Alberta Rural Economy					
Org. code 1480111	Full name of administrative organization and department University of Alberta Rural Economy					
Scholar type	Regular <input checked="" type="radio"/>	New <input type="radio"/>	Research Group			
If New, specify category	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	435-2	
Does your proposal require a multidisciplinary evaluation?					Yes <input checked="" type="radio"/>	No <input type="radio"/>
Does your proposal involve human beings as research subjects? If "Yes", consult the <i>Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans</i> and submit your proposal to your organization's Research Ethics Board.					Yes <input checked="" type="radio"/>	No <input type="radio"/>
Does your proposal involve activity that requires a permit, licence, or approval under any federal statute; or physical interaction with the environment? If 'Yes', complete Appendices A and B.					Yes <input type="radio"/>	No <input checked="" type="radio"/>
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Total funds requested from SSHRC (from page 9)	<u>78,600</u>	<u>151,100</u>	<u>90,100</u>	<u>80,400</u>	<u>0</u>	<u>400,200</u>

Family name, Given name

Parkins, John

Participants

List names of your team members (co-applicants and collaborators) who will take part in the intellectual direction of the research. Do not include assistants, students or consultants.

Role

Co-applicant

Collaborator

Family name

Stedman

Given name

Richard

Initials

C

Org. code

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Full organization name

Cornell University

Department/Division name

Natural Resources

Role

Co-applicant

Collaborator

Family name

Sherren

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Kate

Initials

Org. code

1120411

Full organization name

Dalhousie University

Department/Division name

School for Resource and Environmental Studies

Role

Co-applicant

Collaborator

Family name

Weis

Given name

Tim

Initials

M

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1

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Full organization name

University of New Brunswick

Department/Division name

Faculty of Forestry and Environmental Management

Role

Co-applicant

Collaborator

Family name

Given name

Initials

Org. code

Full organization name

Department/Division name

Research Activity

The information provided in this section refers to your research proposal.

Keywords

List keywords that best describe your proposed research or research activity. Separate keywords with a semicolon.

energy choices; civic engagement; landscape visualization; values elicitation; citizen jury

Priority Areas - Priority area(s) most relevant to your proposal.

1. Canadian Environmental Issues
2. Innovation, Leadership and Prosperity

Disciplines - Indicate and rank up to 3 disciplines that best correspond to your activity.

Rank	Code	Discipline	If "Other", specify
1	61400	Urban and Regional Studies, Environmental Studies	
2	63499	Other Sociology	Environmental Sociology
3	61408	Resource Management	

Areas of Research

Indicate and rank up to 3 areas of research related to your proposal.

Rank	Code	Area
1	170	Energy and natural resources
2	180	Environment and Sustainability
3	320	Politics and government

Temporal Periods

If applicable, indicate up to 2 historical periods covered by your proposal.

From				To			
Year				Year			
	BC	AD			BC	AD	
_____	<input type="radio"/>	<input type="radio"/>	_____	_____	<input type="radio"/>	<input type="radio"/>	_____
_____	<input type="radio"/>	<input type="radio"/>	_____	_____	<input type="radio"/>	<input type="radio"/>	_____

Family name, Given name
Parkins, John

Research Activity (cont'd)

Geographical Regions

If applicable, indicate and rank up to 3 geographical regions covered by or related to your proposal. Duplicate entries are not permitted.

Rank	Code	Region
1	1130	Western Canada
2	1110	Atlantic Provinces
3		

Countries

If applicable, indicate and rank up to 5 countries covered by or related to your proposal. Duplicate entries are not permitted.

Rank	Code	Country	Prov./ State
1	1100	CANADA	AB
2	1100	CANADA	NS
3			
4			
5			

STATEMENT OF ALIGNMENT

This project is aligned closely with two of SSHRC's priority areas: (1) Canadian Environmental Issues, and (2) Innovation, Leadership and Prosperity. More specifically, the project is focused on three environmental topics that link to SSHRC priority areas: climate change impact and adaptation, energy and natural resources, and the environmental impact of new technology. Consistent with the Canadian Environmental Assessment Agency definitions, if we understand environmental impacts to include the biophysical environment (air, water, land, plants and animals) as well as the social and economic environments of the people to be affected (CEAA Citizen's Guide), then this project draws on evidence of climate change and the drive for energy technology innovation as strategies for adaptation and mitigation. We give explicit attention to the growing demand for energy development across Canada, the need for energy literacy, and the challenge of shifting well-established cultural imaginaries of our existing energy economy through citizen engagement and public deliberation. These project objectives represent close alignment with Canadian Environmental Issue priorities and project outcomes that will lead to: (1) increased public knowledge and awareness of energy development options, (2) the identification of energy development alternatives, (3) best practices for citizen engagement in project appraisal and impact assessment, and (4) trained high quality personnel in this field of research and process design.

This project is also closely aligned with innovation, leadership and prosperity objectives in the knowledge that all technologies involve the interlinking of physical and socio-cultural components. In this way, technological innovations and adaptations in the energy sector requires social innovation as it emerges and becomes established in the already established cultural landscapes and cultural values of a given region. Innovation and leadership is an important component of our third project objective in particular; to use deliberative democratic techniques to facilitate citizen deliberations, support learning and generate public choices and options for energy development. The project offers social innovations that extend well beyond current requirements for public consultation at provincial and federal levels – consultation that is often accompanied by frustration, inertia, and public resistance to a variety of energy development alternatives. Working with local leaders and civil society organizations, this project will foster skills development, new capacity, and social innovations to deal with the challenging and complex problems of new project development in the energy sector.

REQUEST FOR MULTIDISCIPLINARY EVALUATION

This project integrates scholarship across several disciplines including human geography, environmental sociology, rural sociology and environmental studies. Our primary Research Group is 435-2 (geography and environmental studies), but we also have substantial theoretical and methodological content that may not be covered by evaluators from this group. Therefore we expect that evaluators may need to be drawn from a second group (i.e., 435-4), with knowledge of environmental sociology and rural sociology in particular.

The multidisciplinary nature of our work is represented in the research team and the disciplinary backgrounds that are represented in our university departments (i.e., Parkins – Environmental Sociology; Sherren – Resource and Environmental Studies; Beckley – Forestry and Environmental Management; Stedman – Natural Resources). Moreover, the novel research framework that we deploy within this project is constructed within an interdisciplinary context. The *cultural imaginary of energy development* draws on a rich theoretical tradition from Durkheim, Gramsci, Giddens and Taylor, but we extend these ideas theoretically in several important ways. First, we draw on work from human geography and landscape ecology to explore a cultural landscape of energy development. We also draw on research from environmental sociology to explore the cultural values associated with energy development. Finally, our theoretical framework extends to literature on political science as a way of exploring the transformation of cultural imaginaries through local processes of deliberative democracy. With this multidisciplinary research framework, evaluators may be required from outside of our primary research group.

Flowing from this theoretical framework, our research methods are also multidisciplinary with data collection that includes the following: Repertory Grid Analysis, Q-method, landscape visualization, in-depth interviews, quantitative survey research, and citizen jury procedures that offer cumulative insights and directions for project activities over a four year period. These diverse methodologies may also require evaluators from more than one group.

Family name, Given name

Parkins, John

Response to Previous Critiques - maximum one page

Applicants may, if they wish, address criticisms and suggestions offered by adjudication committees and external assessors who have reviewed previous applications.

Family name, Given name

Parkins, John

Summary of Proposed Research

The summary of your research proposal should indicate clearly the problem or issue to be addressed, the potential contribution of the research both in terms of the advancement of knowledge and of the wider social benefit, etc.

Energy policy, investment in energy infrastructure and the social, economic and ecological impacts of energy development are among the most critical issues confronting society today, yet 'energy literacy' and public support for the development of energy alternatives remains quite low. Policy makers are pushing for more energy development in many regions, and industries are more than ready to move forward with new energy projects (McKenna, 2011), but citizens often struggle to understand and accept these projects. Public resistance to energy development is often fierce, even when alternatives offer proven advantages over traditional carbon-intensive options (Bell and Weis, 2009); and this resistance come partly from citizens who feel ill prepared and unfamiliar with new energy alternatives (Devine-Wright, 2009; Haggett, 2011).

Faced with these challenges, this project aims to gather new scientific insights, foster civic deliberation, facilitate learning, and explore complex energy choices in Canada. Our approach is innovative, comparative, interdisciplinary, and organized around three broad objectives, to: (1) use elicitation and visualization techniques to understand how individually held landscape values influence citizen responses to energy development; (2) use Q methodology and survey research to understand cultural values and gauge technical literacy related to energy development in Canada; and, (3) draw on insights from objectives 1 and 2 (and use deliberative democratic techniques) to facilitate citizen deliberations and learning to identify acceptable energy alternatives. These objectives are intended to elucidate a "cultural imaginary of energy development" and to help find ways to re-imagine it for the future.

By examining the contours of this cultural imaginary, this interdisciplinary project draws on original and innovative research frameworks and methods to enhance literacy, understanding, civic engagement, and public policy alternatives. Our work helps identify more appropriate and acceptable energy development alternatives (renewable and non-renewable) within several regions of the country by delineating current imaginaries of landscapes and value frames that dominate our collective experience, and by providing an important pathway for civic engagement and public deliberation. This contribution extends far beyond conventional, typically single-project, public consultation processes. Moreover, through deliberative democratic techniques operating outside of government or industry realms, the project offers a way to challenge dominant cultural imaginaries, inertia, and resistance to alternative energy development as an important component of our collective response to the challenges of climate change.

Adaptation to and mitigation of climate change will involve widespread transitions to technologies such as renewable energy and carbon capture and storage that will affect our landscapes and our cultural imaginaries, but these transitions can only take place where civil society has shifted their understanding of what is needed, what is desirable, and what is possible. Gaining deeper insight into public understandings of energy development alternatives will be an essential component to making the transition successfully and democratically. Working with civil society organizations such as the Pembina Institute and regional institutions within our study locations, this project has strong potential to contribute to public understanding of alternative energy development, encourage an appropriate mix of energy supply and conservation measures, improve energy development protocols and contribute to the adaptation and mitigation of climate change.

DETAILED DESCRIPTION OBJECTIVES

Energy policy, investment in energy infrastructure and the social, economic and ecological impacts of energy development are among the most critical issues confronting society today, yet 'energy literacy' and public support for the development of energy alternatives remains quite low. Policy makers are pushing for more energy development in many regions, and industries are more than ready to move forward with new energy projects (McKenna, 2011), but citizens often struggle to understand and accept these projects. Public resistance to energy development is often fierce, even when alternatives offer proven advantages over traditional carbon-intensive options (Bell and Weis, 2009); and this resistance come partly from citizens who feel ill prepared and unfamiliar with new energy alternatives (Devine-Wright, 2009; Haggett, 2011).

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CONTEXT

Climate change and energy alternatives

Experts agree that human activities over the past two-hundred years have induced irreversible global temperature increases of at least one degree and warn about future impacts on the planet from a changing climate (Intergovernmental Panel on Climate Change, 2007). To mitigate global warming, jurisdictions at all scales are exploring options to reduce dependencies on dwindling (often imported) fossil fuel reserves and to lower carbon pollution. Both alternatives call for improved energy efficiency and transitions toward green energy sources. These energy options involve tradeoffs between reliability or consistency of supply and net power gain. Because of these tradeoffs, experts predict energy futures that are characterized by a diversity of installation types that are more geographically distributed, as seen in energy-progressive countries like the UK, Germany and Denmark (Gipe, 2002; McLachlan 2009). Energy security – local control over an affordable, reliable and ethical energy supply – has been a secondary driver (Turner, 2007; Pasqualetti, 2011). The impact of these diverse and distributed energy installations across Canada – upon its citizens, communities, and landscapes – is thus an increasing challenge that deserves closer examination.

Cultural imaginary as a research framework

With this backdrop of changing energy landscapes in Canada, we have identified a novel research framework to provide coordination and theoretical direction for our interdisciplinary work. By focusing on different manifestations of culture as it relates to our project, we seek to delineate a *cultural imaginary of energy development*. An imaginary is formed through the iterative creation of what we understand as reality through social, psychological and institutional processes (Castoriadis, 1987). The concept of an imaginary has some relation to more familiar concepts like 'social facts' as described by Durkheim (1895), the shaping of 'social action through culture' as described by Swidler (1986) or even the maintenance of 'hegemonic discourses' as described by Gramsci (1971). Canadian philosopher Charles Taylor describes the imaginary as a "common understanding which makes possible common practices and a widely shared sense of legitimacy" (Taylor, 2007: 172). Through this collective cultural imaginary, we gain a subtle sense that the possibilities we imagine for ourselves are

given in nature and are therefore comprehensive, coherent and unquestionable. The imaginary offers answers to the big questions of life. Who are we? What do we need? What is desirable? Yet these imaginaries also limit action and social change (as per Giddens' (1979) structuration process) and are thus becoming an important focus of attention within the social sciences. In examining resistance to social change in the face of climate change Leahy *et al.* (2010: 864) note that current modes of thought are "based on a set of fictions, which become real if society operates by them. People forget human beings have imagined them, and often feel powerless to intervene." Similarly, Norgaard (2010: 6) draws on socialization theory from Zerubavel (2002) to understand the "social organization of denial" in reaction to the evidence of a changing climate.

Anchored to this cultural imaginary of energy development are three related concepts. The first concept involves energy landscapes, aesthetics, and our sense of place and identity as rooted in a *cultural landscape* (Objective 1). Culture is inextricably linked to landscapes and energy development – from wind mills and solar arrays to oil sands and hydroelectric facilities – and has profound effect upon landscapes (Gobster *et al.* 2007; Kaplan, 1987). The landscapes humans create as they meet their needs and desires are not always beautiful or healthy, but they comprise heritage that contributes significantly to an individual's sense of place or identity (Egoz *et al.* 2001; Nassauer, 1995; Oreszczyn, 2000). According to Nassauer (1995: 230) "culture not only helps to explain landscape structure, it helps to suggest the enormous array of possible human actions and constructions in the landscape, including landscapes that do not exist now but might be designed to promote ecological function." Similarly, although climate change holds threats for the landscapes that inspire our sense of place and identity, the actions we take to adapt to or mitigate climate change may also degrade them (Adger *et al.* 2009; O'Brien, 2009). In this way, our cultural landscapes are a component of our cultural imaginary, in that they are a component of our collective experience, what we desire and our sense of what is possible and appropriate.

A second concept involves attention to *cultural values* (Objective 2). Cultural values play an important role in conditioning human responses to environmental problems (Dunlap *et al.* 2000). The presentation of factual information about environmental issues plays only a partial role in determining people's judgments. By contrast, cultural values that are represented in notions of popularity, image, conformity, competition, community, affiliation, empathy and spirituality offer better leverage for understanding beliefs and attitudes (Compton, 2010; Kahan, 2010). According to Lakoff (2004: 11), "[frames] are the mental structures that allow human beings to understand reality – and sometimes to create what we take to be reality. [T]hey structure our ideas and concepts, they shape how we reason, and they even impact how we perceive and how we act." Such cultural values are thus rich frames of meaning, understanding and judgment for exploring complex issues like alternative and conventional energy options.

A third concept involves *transforming the cultural imaginary of energy development*, leading to new understandings and new strategies for energy development in Canada (Objective 3). One of the challenges posed by climate change mitigation is the vastness of the problem. People often feel their potential individual contributions are meaningless in the grand scheme of things. Much of the research in this project takes place at the regional-scale of landscapes, however, much larger than the individual but much smaller than the planetary scale. This scale of research may help people better imagine how cooperation with neighbours and neighbouring communities may contribute to our current energy challenges. Toward this end, we draw on insights from deliberative democratic theory, which is concerned with sustained "debate and discussion aimed at producing reasonable, well-informed opinion in which participants are willing to revise preferences in light of discussion, new information, and claims made by fellow participants" (Chambers, 2003: 309). Since the early 1990s, deliberative democratic theory has flourished into an influential body of work and an understanding of social change through communicative action (Habermas, 1987). Key contributions to the literature are

contained in several volumes (Calhoun, 1992; Bohman and Rehg, 1997; Dryzek, 2000; Kahane *et al.* 2010), and theoretical as well as applied concepts such as citizen juries will be utilized in this project.

Related literature

This project also touches on a number of other fields of study. In addressing public perception of energy risks, the psychometric and sociological traditions of social risk assessment both provide insight into public attitudes and differential preferences for energy technologies (Dietz *et al.* 2001; Slovic 2000). Wind power, for example, has broad public support that often erodes when specific place-based proposals are made public (Gipe, 2002; Pasqualetti, 2011). Several scholars have rejected early explanations of public disapproval of renewables that were based on NIMBYism (Not in My Back Yard) and that served to discredit opponents (Devine-Wright, 2009; Wolsink, 2007). Opposition is more complex in reality, including variables like: specific design characteristics (Gipe, 2002); the process of local consultation (Wolsink, 2007; Anderson *et al.*, 2011); how welcome the resulting new jobs might be (Haggett, 2011); symbolic interpretations of the technology and the place alike (McLachlan, 2009), and opportunities for local ownership and control (Beckley *et al.* 2006).

Natural resource managers are increasingly considering the role that 'sense of place' plays in public responses to planning proposals, as citizens become more acutely aware of the threats of external forces like globalization on the irreplaceable places they love (Williams, 2008). Such 'topophilia' (love of place) (Tuan, 1974) is based in the many dimensions of attachment between people and spaces: ownership, identity, stories, etc. These attachments occur because of specific characteristics of the space (Arler, 2000; Stedman, 2003; Gobster *et al.*, 2007) and the history of lived experience there or in similar places (Tuan, 1977; Greider and Garkovich, 1994). For instance, although people can be attached to places they have never visited (Gunderson & Watson, 2007) residents of a place experience and value it very differently in comparison to others such as resource planners (Burton, 2011; Oreszczyn, 2000; Vouligny *et al.* 2009). Devine-Wright (2009) has framed opposition to renewable energy as a place-protective behaviour, which rings true. Sense of place will thus be an important driver, or constraint, of climate change adaptation and mitigation strategies.

The resilience literature also offers important insights into the processes of change and renewal at a community level. One tradition within the resilience literature grows from work on biological systems (Holling, 1973) and then provides a model for understanding adaptation within social ecological systems (Holling and Gunderson, 2002). Defined as the capacity to withstand stress without collapse and rather reorganizing to maintain its role (Brand and Jax, 2007). As many rural communities continue to redefine themselves and seek new livelihood opportunities (Parkins and Reed, forthcoming), concepts of social-ecological resilience offer insights into processes of renewal and adaptation, disorganization and reorganization, that are conditioned by the cultural imaginary of energy development.

Relationship to ongoing research

This project contributes to ongoing research in terms of understanding community – industry transition within a rural and a resource-based context. Research to date is focused on social indicators, macro-level accounting, and quantitative perspectives on resource industries and communities across Canada (Stedman *et al.* 2011; Patriquin *et al.* 2007; Parkins *et al.* 2004) as well as micro-level analysis of social disruption, social and cultural impacts and qualitative perspectives on rural and remote communities (Angell and Parkins, 2011; Parkins and Angell, 2011). With a focus on energy development, this project offers a continuation of this analysis with a deeper focus on culture, values, and the opportunities and challenges of energy development at the scale of communities and regions across Canada.

A second link to ongoing research involves recent work on risk perception and vulnerability to climate change in resource-based communities (Davidson *et al.* 2003; Parkins and MacKendrick, 2007; Parkins, 2008; Sherren *et al.* in review), where this project continues our focus on public

understandings of risk in relation to energy alternatives. This project is closely aligned with ongoing attention to social impact assessment, cumulative effects assessment and social indicators research (Mitchell and Parkins, 2011; Asselin and Parkins, 2009).

A third research theme that continues within this project has to do with deliberative democracy and civic engagement in the context of natural resource management (Richardson et al. 2011; Crosby and Parkins, 2010; Robson and Parkins, 2010; Parkins, 2010; Parkins and Davidson, 2008; Sherren *et al.* in press). Themes of public deliberation, trust, and equity will play an ongoing role in our work, but with a stronger focus in this project on deliberative practice and the development of energy policy options.

Finally, we are extending, translating to new settings, and together integrating, methods in which we have considerable experience, for instance large-scale quantitative surveys (McFarlane *et al.* 2011; Kennedy *et al.* 2009; Jacquet and Stedman, 2011; Schirmer *et al.*, in review; Sherren *et al.*, in review-b); photo-elicitation (Beckley *et al.* 2007, Sherren *et al.*, 2010; Sherren *et al.*, 2011; Sherren *et al.*, in review-a; Stedman *et al.* 2004), landscape visualization (Sherren *et al.*, in press), and public +deliberation (Parkins and Davidson, 2008; Beckley *et al.* 2006).

Importance, originality, contribution

Through the cultural imaginary of energy development, this interdisciplinary project draws on original and innovative research frameworks and methods to enhance literacy, understanding, civic engagement, and public policy alternatives. Our work helps identify an appropriate and acceptable mix of energy development alternatives (renewable and non-renewable) within several regions of the country by delineating current imaginaries of landscapes and value frames that dominant our collective experience, and by providing an important pathway for civic engagement and public deliberation. This contribution extends far beyond conventional, typically single-development, public consultation exercises. Moreover, through deliberative democratic techniques operating outside of government or industry realms, the project offers a way to challenge dominant cultural imaginaries, inertia, and resistance to alternative energy development as an important component of our collective response to the challenges of climate change. Adaptation to and mitigation of climate change will involve widespread transitions to technologies such as renewable energy and carbon capture and storage that will affect our landscapes and our cultural imaginaries, but these transitions can only take place where civil society has shifted their understanding of what is needed, what is desirable, and what is possible. Gaining deeper insight into public understandings of energy development alternatives will be an essential component to making the transition successfully and democratically. Working with civil society organizations such as the Pembina Institute and regional institutions within or study locations, this project has strong potential to contribute to public understanding of alternative energy development, encourage an appropriate mix of energy supply and conservation measures, improve protocols for siting new installations and contribute to the adaptation and mitigation of climate change.

METHODOLOGY

Research sites

The project takes a comparative case study approach with two case study regions, one in New Brunswick and one in Alberta. We draw on what Flyvbjerg (2006) calls a context-dependent case study, or what Stake (1995) identifies as an intrinsic case study, where researchers are able to understand “the deeper causes behind a problem and its consequences [rather] than to describe the symptoms of the problem and how frequently they occur” (Flyvbjerg, 2006: 229). Comparative methods are described in detail below, and a timeframe for research is provided in the budget justification.

Mactaquac Region – New Brunswick offers a great opportunity to examine energy development issues. It is currently in the midst of a heated debate over shale gas development, the nuclear plant is undergoing refurbishment, wind energy is growing, albeit slowly and with non-local

corporate ownership. Current reliance on fossil fuels is relatively high (approximately 50%). Hydro power provides a significant amount of the province's power, but that infrastructure is aging and significant re-investment will be required to keep that power online. The Mactaquac region was significantly transformed in the 1960s with a major hydro facility that significantly altered the landscape of the St. John River Valley between Fredericton and Woodstock. That dam provides 20% of the province's power, but will either need to be replaced within the next 5-15 years or other energy sources will need to be found if the dam is decommissioned. In 2009, a former premier attempted to sell the Crown Corporation, NB Power, to Hydro Quebec. This proposal to sell NB Power is widely believed to be the reason for a failed re-election bid. The popular movement to oppose the sale was a landmark moment in grassroots public engagement in New Brunswick and raised the level of consciousness about energy issues. However, it also exposed a level of ignorance about energy and energy options even among the educated and among decision-makers in the province.

Peace River Region – Alberta is an energy powerhouse within Canada, with extensive conventional oil and gas development and high-profile oil sands development throughout the northern part of the province. The province has also identified 15 shale gas formations (850 trillion cubic feet), 37 billion tons of coal reserves, along with a variety of other energy projects that are proposed or underway within the province (Government of Alberta, 2010). For instance, Alberta's Provincial Energy Strategy (Government of Alberta, 2008) identifies nuclear power as a clean source of power, and Bruce Power Corporation is currently exploring nuclear power development in the Peace River region. Trans Alta is proposing a run-of-river hydro dam on the Peace River in the Dunvegan area, and the Town of Pincher Creek in southern Alberta is providing leadership in the development of wind power with 167 MW of installed capacity in 2007 and proposed output for all projects under consideration reaching 706.2 MW (Municipal District of Pincher Creek No.9, 2010). Many of these energy alternatives are present within the Peace River region of Alberta, and this location along with the Mactaquac region of New Brunswick will serve as our two primary research sites in this project. The project will focus explicitly on a dual scale of analysis, however, with one scale at the regional level and another scale at the provincial level.

Methods and procedures

Objective 1: Use elicitation and visualization techniques to understand how individually held landscape values influence citizen responses to energy development

This research will elicit individually held values, perceptions, and preferences around energy and landscapes by engaging with Kelly's personal construct theory. This theory holds that as people encounter the world, they build unique yet changeable construct systems of interpretations and expectations that drive their behavior and decision-making (Harrison and Sarre, 1975; Fransella and Bannister, 1977; Dalton and Dunnett, 1992). These 'mental maps' are so deeply held they have to be elicited by watching what people do in specially designed constrained tasks such as Repertory Grid Analysis (RGA) and Q-methodology, rather than asking directly in surveys or interviews. RGA is a structured way of eliciting constructs by iteratively presenting triads of elements from a bank and asking the respondent to identify how two of them differ from a third. Each resulting dichotomy is then used to classify other elements in the bank. Finally, using pattern matching or factor analysis, the relationships between constructs are determined by their links to similar elements (Palmer, 1978; Mansfield and Ginosar, 1994; Coakes *et al.*, 1999; Coshall, 2000). We will first use landscape visualization techniques to simulate feasible landscape scenarios for a range of energy sources indigenous to each case area (Al-Kodmany, 1999; Hunziker and Kienast, 1999; Sheppard, 2005; Dockerty *et al.*, 2006; Sherren *et al.*, in press). These will be compiled into case-based image banks, for each of which a sample population of citizens will be asked to complete a repertory grid. This will produce: 1) a range of contrasting concept sets revealing, for instance, aesthetic preferences, risk perceptions, and level of knowledge, and 2) the position of each energy scenario typically on each

resulting concept spectrum. These results will inform the citizen jury processes later in this study, as well as policy-makers in various jurisdictions, as they deliberate over energy futures. Visualizations will be enhanced with additional data about each energy source, for use in the citizen juries, including reliability of supply, net power gain, and the probabilities of adverse impacts.

Objective 2: Use Q methodology and survey research to understand cultural values and gauge technical literacy related to energy development in Canada. Q methodology is a multi-staged process for studying the structure of language and discourse (Brown, 1993). It was developed to discover the deeper tacit levels of knowledge that are held by a population and to establish the diversity and the parameters of multiple discourses that exist on a particular topic (Woolley and McGinnis, 2000). The method involves several stages. First semi-structured interviews establish a “concourse” or universe of statements on the topic of energy development alternatives within a region. Second, these statements are then sorted into a smaller list of approximately 40 statements that are then sorted (Q-sort) by research participants and analyzed using factorial statistical procedures to arrive at statistically unique constellations of discourses (Danielson *et al.* 2010). In-depth interviews and Q-sort will form the basis for determining a “local universe” of culture values as expressed by citizens in relation to energy choices. Research will also include a large-scale random sample of residents across Canada, to gain insight into levels of energy literacy and energy development preferences within the general population. Survey research will complement and extend the repertory grid and Q-method approaches to values elicitation.

Objective 3: Drawing on insights from objectives 1 and 2 and using deliberative democratic techniques, facilitate citizen learning and deliberations toward identifying acceptable energy production and consumption alternatives. This objective is focused on deliberative democratic processes to facilitate civic engagement, learning and social change. In the later stages of this project, we will use insights gathered from the research described above to construct a ‘knowledge rich’ context for public dialogue. We are interested in the role of knowledge and experience in public deliberation (Carolan, 2006), as well as the interaction between citizens and experts (Fischer, 2000), as two important dimensions for learning and social change. This project also has a clear focus on practices and public policy development. The goal here is not to push for one particular direction in energy development but rather to gain much deeper understandings of the complexities and challenges that are situated behind public acceptance and resistance and then attempt to find ways forward through public deliberation that are respectful of difference and open to unique solutions and surprising ways forward. Citizen juries will be used as the primary tool for public deliberation on energy choices (Brown 1995; Einsiedel and Ross, 2002). The citizen jury that involves a stratified sample of approximately 15 individuals who review detailed briefing materials about energy choices, deliberate together for an extended period of time (often 2 or 3 days) and come forward with a considered opinion. Beyond the academic questions expressed above, this method can include extended public attention through media and other sources, and will facilitate knowledge mobilization within our case study regions.

REFERENCES

- Adger, N.W., S. Dessai, M. Goulden, M. Hulme, I. Lorenzoni, D. R. Nelson, L.O. Naess, J. Wolf, A. Wreford. 2009. Are there social limits to adaptation to climate change? *Climatic Change*, 93:335–354.
- Al-Kodmany, K. 1999. Using visualization techniques for enhancing public participation in planning and design: process, implementation and action. *Landscape and Urban Planning* 45, 37-45.
- Anderson, C., Schirmer, J., Abjorensen, N. 2011. Exploring CCS community acceptance and public participation from a human and social capital perspective. *Mitigation and Adaptation Strategies for Global Change*, 1-20.
- Angell, A. and J.R. Parkins. 2011. Tracking the elusive relationship between resource development & Aboriginal culture in the Canadian North and Alaska from the 1970s to present. *Polar Record* 47 (240), 67-79.
- Arler, F., 2000. Aspects of landscape or nature quality. *Landscape Ecology* 15, 291-302.
- Asselin, J. and J.R. Parkins. 2009. Comparative case study as social impact assessment: Possibilities and limitations for anticipating social change in the far north. *Social Indicators Research*, 94, 583-497.
- Bailey, J.A., Gordon, R., Burton, D., Yiridoe. E.K., 2008. Factors which influence Nova Scotia farmers in implementing energy efficiency and renewable energy measures. *Energy* 33, 1369-1377.
- Beckley, T.M. J.R. Parkins, and S.R.J. Sheppard. 2006. Public participation in sustainable forest management: A reference guide to best practices. Knowledge Exchange and Technology Exploitation (KETE) programme of the *Sustainable Forest Management Network*, Edmonton, AB. http://sfmnetwork.ca/docs/e/SR_200506beckleypub_en.pdf
- Beckley, T.M., Stedman, R.C., Wallace, S.M., Ambard, M. 2007. Snapshots of what matters most: using resident-employed photography to articulate attachment to place. *Society and Natural Resources* 20, 913-929.
- Bell, J. and T. Weis. 2009. *Greening the Grid: Powering Alberta's future with Renewable Energy*. The Pembina Institute, Drayton Valley, Alberta.
- Bohman, J. and W. Rehg. 1997. *Deliberative democracy: Essays on reason and politics*. Cambridge, MA: MIT Press.

- Brand, F.S., and K. Jax. 2007. Focusing the Meaning(s) of Resilience: Resilience as a Descriptive Concept and a Boundary Object. *Ecology and Society* 12(1):23.
- Brown, S. 1993. A primer on Q Methodology. *Operant Subjectivity*, 16(3/4), 91-138.
- Brown, T.C., G.L. Peterson, and B.E. Tonn. 1995. The Values Jury to Aid Natural Resource Decisions. *Land Economics*, 71(2): 250-260.
- Burton, R.J.F. 2004. Reconceptualising the 'behavioural approach' in agricultural studies: a socio-psychological perspective. *Journal of Rural Studies* 20:359-371.
- Calhoun, C. ed. 1992. *Habermas and the public sphere*. Cambridge, MA: MIT Press.
- Canadian Council of Forest Ministers. 2011. *Nova Scotia Wood Supply Projections*. National Forestry Database, Ottawa, ON.
- Carolan, M. 2006. Ecological Representation in Deliberation: the Contribution of Tactile Spaces. *Environmental Politics* 15 (3): 345 – 361.
- Castoriadis, C. 1987. *The imaginary institution of society*. Translated by Kathleen Blamey. Policy Press, Cambridge, UK.
- Chambers, S. 2003. Deliberative democratic theory. *Annual Review of Political Science* 6:307–326.
- Coakes, S., Fenton, M., Gabriel, M., 1999. Application of repertory grid analysis in assessing community sensitivity to change in the forest sector. *Impact Assessment and Project Appraisal* 17, 193-202.
- Compton, T. 2010. *Common Cause: The Case for Working with our Cultural Values*. World Wildlife Fund, UK.
- Coshall, J.T., 2000. Measurement of tourists' images: the repertory grid approach. *Journal of Travel Research* 39, 85-89.
- Crosby, W. and J.R. Parkins. 2010. Responsibility and environmental governance: Exploring the changing social relations in developing sustainable forestry in Canada (Chapter 20, pp. 255-266.). In McCauley, T. and J. Hill (eds.). *Canadian Society: Global Perspectives*. De Sitter Publications.
- Dalton, P., Dunnett, G. 1992. *A Psychology for Living: Personal Construct Theory for Professionals and Clients*. J. Wiley & Sons, Chichester, UK.

Danielson, S., T. Webler, and S.P. Tuler. 2009. Using Q Method for the Formative Evaluation of Public Participation Processes. *Society and Natural Resources*, 23:92-96.

Devine-Wright, Patrick. 2009. Rethinking NIMBYism: The role of place attachment and place identity in explaining place-protective action. *Journal of Community & Applied Social Psychology*, 19(6), 426-441.

Dietz, Thomas, R. Scott Frey, Eugene Rosa. 2001. Risk assessment and management. In Scott Frey (ed.). *The Environment and Society Reader*. Toronto: Allyn and Bacon.

Dockerty, T., Lovett, A., Appleton, K., Bone, A., Sunnenberg, G., 2006. Developing scenarios and visualisations to illustrate potential policy and climatic influences on future agricultural landscapes. *Agriculture, Ecosystems and Environment* 114, 103-120.

Dryzek, J. S. 2000. *Deliberative democracy and beyond. Liberals, critics, contestations*. New York: Oxford University Press.

Dunlap, R.E., D. K.D. Van Liere, A. G. Mertig and R. Emmet. 2000. New Trends in Measuring Environmental Attitudes: Measuring Endorsement of the New Ecological Paradigm: A Revised NEP Scale. *Journal of Social Issues* 56 (3): 425-442.

Durkheim, E. 1895. *The Rules of Sociological Method*, translated by S.A. Solovay and J.H. Mueller and edited by George EG Catlin. Chicago: Univ. of Chicago Press, 1938.

Egoz S., Bowring J., and Perkins, H.C. 2001. Tastes in tension: form, function, and meaning in New Zealand's farmed landscapes. *Landscape and Urban Planning* 57:177-196.

Einsiedel, E.F. and H. Ross. 2002. Animal spare parts? A Canadian public consultation on Xenotransplantation. *Science and Engineering Ethics* 8, 579-591.

Fischer, F. 2000. *Citizens, experts, and the environment: The politics of local knowledge*. Durham, SC: Duke University Press.

Fischer, J., Sherren, K., Stott, J., Zerger, A., Warren, G., Stein, J., 2010. Towards landscape-wide conservation outcomes in Australia's temperate grazing region. *Frontiers in Ecology and the Environment* 8, 69-74.

Fischer, J., Stott, J., Zerger, A., Warren, G., Sherren, K., Forrester, R.I., 2009. Reversing a tree regeneration crisis in an endangered ecoregion. *Proceedings of the National Academy of Sciences* 106, 10386-10391.

Flyvbjerg, B. 2006. Five Misunderstandings about Case-Study Research. *Qualitative Inquiry*, 12(2), 219-245.

- Fransella, F., Bannister, D. 1977. *A Manual for Repertory Grid Technique*. Academic Press, London, UK.
- Giddens, A. 1979. *Central Problems in Social Theory*. Berkeley, CA: University of California Press.
- Gipe, P. 2002. Soaring to New Heights: the world wind energy market. *Renewable Energy World*, July-August.
- Gobster, P.H., Nassauer, J.I., Daniel, T.C., Fry, G. 2007. The shared landscape: what does aesthetics have to do with ecology? *Landscape Ecology* 22, 959-972.
- Government of Alberta. 2008. *Launching Alberta's Energy Future: Provincial Energy Strategy*. Edmonton, Alberta.
- Government of Alberta. 2010. *Shaping Alberta's Future. Report of the Premier's Council for Economic Strategy* (Hon. David. L. Emerson, Chair), Edmonton, Alberta.
- Gramsci, A. 1971. *Selections from the Prison Notebooks*, ed. and trans. Q. Hoare and G. Nowell-Smith. London: Lawrence and Wishart Press.
- Greider, T., Garkovich, L. 1994. Landscapes: The social construction of nature and the environment. *Rural Sociology* 59, 1-24.
- Gunderson, K. and A. Watson. 2007. Understanding place meanings on the Bitterroot National Forest, Montana. *Society and Natural Resources*, 2:705-721.
- Habermas, J. 1987. *The Theory of Communicative Action* (Translated by Thomas McCarthy). Boston, MA: Beacon Press.
- Haggett, Claire. 2011. Understanding public responses to offshore wind power. *Energy Policy*, 39(2), 503-510.
- Harrison, J., Sarre, P., 1975. Personal construct theory in the measurement of environmental images. *Environment and Behavior* 7, 3-58.
- Holling, C.S. 1973. "Resilience and stability of ecological systems." *Annual Review of Ecology and Systematics* 4(1):1-23.
- Holling, C.S, and L.H. Gunderson. 2002. "Resilience and Adaptive Cycles." Pp. 25 - 62 in *Panarchy: understanding transformations in human and natural systems*, edited by Lance H Gunderson and C S Holling. Washington DC: Island Press.

Hughes, L. 2007. *Energy Security in Nova Scotia*. Canadian Centre for Policy Alternatives, Halifax, NS and online at http://www.policyalternatives.ca/sites/default/files/uploads/publications/Nova_Scotia_Pubs/2007/ccpa_ns_energy_security.pdf, p. 73.

Hunziker, M., Kienast, F. 1999. Potential impacts of changing agricultural activities on scenic beauty - a prototypical technique for automated rapid assessment. *Landscape Ecology* 14, 161-176.

Intergovernmental Panel on Climate Change, 2007. *Fourth Assessment Report*. Cambridge University Press, Cambridge, UK.

Jacquet, J., and R.C. Stedman. Emergence of landowner coalitions in Marcellus Shale. *Rural Social Studies*. 26(1): 62-91.

Kahane, D., D. Weinstock, D. Leydet and M. Williams. 2010. *Deliberative Democracy in Practice*. UBC Press.

Kahan, D.M. 2010. *Fixing the communications failure*. *Nature*, 463, 296-297.

Kaplan, S. 1987. Aesthetics, Affect, and Cognition: Environmental Preference from an Evolutionary Perspective. *Environment and Behaviour* 19:3-32.

Kennedy, J. E., T. M. Beckley, B. McFarlane and S. Nadeau. 2009. Why we don't "walk the talk": Understanding the environmental values-behaviour gap in Canada. *Human Ecology Review*. 16(2):151-160

Lakoff, G. 2004. *Don't Think of an Elephant! Know your Values and Frame the Debate*. White River Junction, VT: Chelsea Green Publishing.

Leahy, T., V. Bowden and S. Threadgold. 2010. Stumbling towards collapse: Coming to terms with the climate crisis. *Environmental Politics*, 19(6), 851-868.

Mansfield, Y., Ginosar, O. 1994. Evaluation of the repertory grid method in studies of locals' attitude towards tourism development processes. *Environment and Planning A* 26, 957-972.

McFarlane, B. L., T. M. Beckley, E. Huddart-Kennedy, S. Nadeau, S. Wyatt. 2011. Public views on forest management: value orientation and forest dependency as indicators of diversity. *Canadian Journal of Forest Research*. 41(4):740-749.

McKenna, B. 2012. McGuinty's green energy 'explosion' more an implosion. *The Globe and Mail*, June 12.

- McLachlan, C. 2009. Technologies in place: symbolic interpretations of renewable energy. *The Sociological Review* 57, 181-199.
- Mitchell, R. E., and J. R. Parkins. 2011. The challenge of developing social indicators for cumulative effects assessment and land use planning. *Ecology and Society*, 16(2).
- Nassauer, J.I. 1995. Messy ecosystems, orderly frames. *Landscape Journal* 14(2):161-169.
- Norgaard, K.M. 2010. *Living in denial: Climate change, emotions, and everyday life*. Cambridge, MA: The MIT Press.
- NRTEE (National Round Table on the Environment and the Economy). 2011. *Parallel paths: Canada-U.S. climate policy choices - outreach report*. Ottawa, Ontario.
- O'Brien, K.L. 2009. Do values subjectively define the limits to climate change adaptation? Pages 164-180 in Adger W.N., Lorenzoni I., and O'Brien K.L., editors. *Adapting to Climate Change: Thresholds, Values, Governance*. Cambridge University Press, Cambridge, UK.
- Oreszczyn, S. 2000. A systems approach to the research of people's relationships with English hedgerows. *Landscape and Urban Planning* 50:107-117.
- Palmer, C.J. 1978. Understanding unbiased dimensions: the use of repertory-grid methodology. *Environment and Planning A* 10, 1137-1150.
- Parkins, J.R. 2008. The metagovernance of climate change: Institutional adaptation to the Mountain Pine Beetle epidemic in BC. *Journal of Rural and Community Development* 3(2), 7-26.
- Parkins, J.R. 2010. The problem with trust: Insights from advisory committees in the forest sector of Alberta. *Society & Natural Resources*, 23, 1-15.
- Parkins, J.R. and A.C. Angell. 2011. Linking social structure, fragmentation and substance abuse in a resource-based community. *Community, Work & Family*, 14(1), 39-55.
- Parkins, J.R. and D.J. Davidson. 2008. Constructing the public sphere in compromised settings: A case study of environmental decision-making in the Alberta forest sector. *Canadian Review of Sociology*, 45(2): 177-196.
- Parkins, J.R. and M.G. Reed (Editors). Forthcoming. *Social transformation in rural Canada: New insights into to community, culture, and citizenship*. Vancouver, BC: UBC Press.
- Parkins, J.R. and N.A. MacKendrick. 2007. Assessing community vulnerability: A study of the mountain pine beetle outbreak in British Columbia, Canada. *Global Environmental Change* 17: 460-471.

- Parkins, J.R., J. Varghese and R.C. Stedman. 2004. Identifying indicators of community sustainability in the Robson Valley. *BC Journal of Ecosystems and Management* 4(2).
- Pasqualetti, Martin J. 2011. Opposing Wind Energy Landscapes: A Search for Common Cause. *Annals of the Association of American Geographers*, 101(4), 907-917
- Patriquin, M., J.R. Parkins, R.C. Stedman. 2007. Socioeconomic status of boreal communities in Canada. *Forestry: An international journal of forest research*, 80(3), 279-291.
- Patriquin, M.N., J.R. Parkins, and R.C. Stedman. 2009. Bringing home the bacon: Industry, employment and income in the boreal region of Canada. *The Forestry Chronicle*, 85(1), 65-74.
- Robson, M. and J.R. Parkins. 2010. Taking the pulse of civic engagement in forest management. *The Forestry Chronicle*, 86(6), 692-696.
- Rotherham, T., 2003. Canada's privately owned forest lands: Their management and economic importance. *The Forestry Chronicle* 79, 106-109.
- Richardson, K., A.J. Sinclair, M.G. Reed and J.R. Parkins. 2011. Constraints to participation in Canadian forestry advisory committees: A gendered perspective. *Canadian Journal of Forest Research*, 41: 524-532.
- Schirmer, J., Clayton, H., Sherren, K., in review. Reversing scattered tree decline on farms: implications of landholder practice and perceptions in the Lachlan catchment, NSW. *Australasian Journal of Environmental Management*.
- Sheppard, S.R.J., 2005. Landscape visualisation and climate change: the potential for influencing perceptions and behaviour. *Environmental Science and Policy* 8, 637-654.
- Schirmer, J., Clayton, H., Sherren, K., in review. Reversing scattered tree decline on farms: implications of landholder practice and perceptions in the Lachlan catchment, NSW. *Australasian Journal of Environmental Management*.
- Sherren, K., Fischer, J., Clayton, H., Hauldren, A., Dovers, S., in press. Lessons from visualising the landscape and habitat implications of tree decline - and its remediation through tree planting - in Australia's grazing landscapes. *Landscape and Urban Planning*.
- Sherren, K., Fischer, J., Fazey, I., Clayton, H., Price, R., in review-a. Grazing management landscapes: insights for agricultural adaptation from a mid-drought photo-elicitation study in the Australian sheep-wheat belt. *Agricultural Systems*.
- Sherren, K., Fischer, J., Pink, J., Stott, J., Stein, J., 2011. Australian graziers value sparse trees in their pastures: a viewshed analysis of photo elicitation. *Society and Natural Resources* 24, 412-422.

Sherren, K., Fischer, J., Price, R., 2010. Using photography to elicit grazier values and management practices relating to tree survival and recruitment. *Land Use Policy* 27, 1056-1067.

Sherren, K., Yoon, H.-J., Clayton, H., Schirmer, J., in review-b. Do Australian graziers have an offset mindset about their farm trees? *Biodiversity and Conservation*.

Simpson, J., 2010. *In with biomass, out with common sense*. Chronicle Herald, Halifax, NS.

Sinclair, P., 2011. *Energy in Canada*. Oxford University Press, Don Mills, ON.

Slovic, P. 2000. *The Perception of Risk*. London, UK: Earthscan.

Stake, R. 1995. *The Art of Case Study Research*. Newbury Park, CA: Sage.

Stedman, R.C. 2003. Is it really just a social construction? The contribution of the physical environment to sense of place. *Society and Natural Resources* 16, 671-685.

Stedman, R.C., Beckley, T.M., Wallace, S.M., Ambard, M., 2004. A picture and 1000 words: Using resident-employed photography to understand attachment to high amenity places. *Journal of Leisure Research* 36, 580-606.

Stedman, R.C., M. Patriquin, and J.R. Parkins. 2011. Forest Dependence and Community Well-Being in Rural Canada: A Longitudinal Analysis. *Forestry: An International Journal of Forest Research*. Advance access online.

Swidler, A. 1986. Culture in Action: Symbols and Strategies. *American Sociological Review*, 51(2), 273-286.

Taylor, C. 2007. *A secular age*. Harvard University Press, Cambridge, Massachusetts, U.S.A.

Tuan, Y.F. 1974. *Topophilia: a study of environmental perception, attitudes, and values*. Prentice-Hall, Englewood Cliffs, NJ.

Tuan, Y.F. 1977. *Space and place: The perspective of experience*. University of Minnesota Press, Minneapolis, MN.

Turner, C. 2007. *The geography of hope: A tour of the world we need*. Random House Canada.

Voulligny, É., Domon, G., and Ruiz, J. 2009. An assessment of ordinary landscapes by an expert and by its residents: Landscape values in areas of intensive agricultural use. *Land Use Policy* 26(4):890-900.

Whitfield, S. C., E. A. Rosa, A. Dan, and T. Dietz. 2009. The Future of Nuclear Power: Value Orientations and Risk Perception. *Risk Analysis*. 29(3): 425-437.

Williams, D.R. 2008. Pluralities of Place: A User's Guide to Place Concepts, Theories, and Philosophies in Natural Resource Management. In: Kruger, L.E., Hall, T.E., Stiefel, M.C. (Eds.), *Understanding Concepts of Place in Recreation Research and Management*. United States Department of Agriculture, Forest Service, Pacific Northwest Research Station, Portland, OR, and online at http://www.fs.fed.us/rm/pubs_other/pnw_gtr744_007_030.pdf, pp. 7-30.

Woolley, J.T. and M.V. McGinnis. 2000. The Conflicting Discourses of Restoration. *Society and Natural Resources* 13: 339-357.

Wolsink, M. 2007. Wind power implementation: The nature of public attitudes: Equity and fairness instead of 'backyard motives'. *Renewable and Sustainable Energy Reviews* 11, 1188-1207.

Yin, R. 2000. *Case study research: Design and Methods*. Newbury Park, CA: Sage.

Zerubavel, E. 2002. The elephant in the room: Notes on the social organization of denial. In *Culture in Mind: Toward a sociology of culture and cognition*, ed. Karen Cerulo. New York: Routledge, 21-27.

KNOWLEDGE MOBILIZATION PLAN

Overall plan

To facilitate the multi-directional flow of information in this project, the knowledge mobilization plan has several key components. The first component is intended to enhance the flow and exchange of knowledge across diverse audiences within the social sciences. Given our multi-disciplinary team, we will be attending academic conferences in geography, sociology and environmental studies as a way to promote theory development and the utilization of diverse empirical approaches to the study of energy landscapes in Canada. Funding for conference travel by investigators and students is an important part of this exchange. The second component involves interactions with diverse audiences that are outside the academic community. These interactions will take place at critical junctures such as the *initial inception meeting* and *end-of-project meetings* for knowledge communication and mobilization (see budget details). These meetings will involve local community leaders, business leaders, civil society organizations, educators, and provincial agencies that are focused on questions of energy development within the region and the province. Critical to this second component is deliberative democratic engagement through *citizen juries* within the two study locations in Alberta and New Brunswick. Citizen juries are intended to foster local interest as a local high-profile event that will attract the attention of local media, opinion leaders, and the general public. As an example, one investigator, Dr. Beckley, has strong local connections with the CBC station in Fredericton and they have already expressed interests in providing media coverage on the citizen jury in New Brunswick. In this sense, citizen juries are more than a research tool; they provide opportunities to mobilize research and influence local perspective on energy development.

With costs for the citizen juries included, the total budget for knowledge mobilization is approximately \$75,000.

Schedule of activities

Year 1 – (1) Project inception meeting in New Brunswick and Alberta with all investigators and collaborators, local community leaders, business leaders and civil society organizations. This includes interactions with key collaborators such as Pembina Institute to address local concerns and build collective understands about research priorities and outcomes.

Year 2 – (1) Two students from Alberta and two students from Dalhousie attend academic conferences to present field research results. (2) One conference per investigator for academic and practitioner conferences.

Year 3 – (1) One conference per investigator for academic and practitioner conferences.

Year 4 – (1) One student from Alberta, one student from New Brunswick and one student from Dalhousie attend academic conferences to present field research results. (2) Citizen jury held in Alberta and New Brunswick, with the involvement of local media and key stakeholders. (3) One visit to Alberta and one visit to New Brunswick by all investigators and collaborators for mobilization of research results with policy and practitioner workshops with provincial-level actors.

Family name, Given name

Parkins, John

Intended Outcomes of Proposed Activities

Elaborate on the potential benefits and/or outcomes of your proposed research and/or related activities.

Scholarly Benefits

Indicate and rank up to 3 scholarly benefits relevant to your proposal.

Rank	Benefit	If "Other", specify
1	Knowledge creation/intellectual outcomes	
2	Student training/skill development	
3	Enhanced research collaboration	

Social Benefits

Indicate and rank up to 3 social benefits relevant to your proposal.

Rank	Benefit	If "Other", specify
1	Enriched public discourse	
2	Enhanced policy	
3	Environmental outcomes	

Audiences

Indicate and rank up to 5 potential target audiences relevant to your proposal.

Rank	Audience	If "Other", specify
1	Academic sector/peers, including scholarly associations	
2	General public	
3	Provincial/territorial government	
4	NGO and community organizations	
5	Municipal government	

Family name, Given name

Parkins, John

Expected Outcomes Summary

Describe the potential benefits/outcomes (e.g., evolution, effects, potential learning, implications) that could emerge from the proposed research and/or other partnership activities.

This research will foster new insights and enhanced dialogue within case study regions about appropriate mixes of energy development alternatives and the values that drive those choices. Although this is an academic project, with clear interests in theory building and empirical analysis, we have identified three social benefits in particular; enriched public discourse, enhanced policy, and environmental outcomes.

This project will contribute to enriched public discourse in several ways. Instead of examining one energy technology at a time (e.g., wind power OR hydro-electricity), we examine several viable energy alternatives within a regional context. Combining visualization and values elicitation methods, quantitative surveys, and deliberative democratic tools will enable more informed values-based conversations about how to balance energy development alternatives. Furthermore, national survey research will provide deeper insights into public understandings and awareness of energy alternatives and how these understandings are related to regional context, media influence, education, employment background, and other important determinants of public discourse.

Although we do not expect to design policy or recommend specific policies to government or industry, we seek to influence environmental policy decisions at several levels. This project is well-positioned to influence the policy development process by modelling holistic ways of public engagement in the energy sector and how such processes can identify informed and robust public preferences for energy development alternatives at a regional scale.

Finally, we hope to contribute to environmental outcomes and improve upon Canada's record as an energy leader. Given the current gridlock around energy development in Canada, as exemplified by the Keystone Pipeline Project, informing and enhancing public discourse on energy alternatives and building public consensus around energy development alternatives in several regions of Canada will contribute to this goal. In the end, however, we are looking beyond the narrow parameters of energy technology, to the importance of understanding the "cultural imaginary of energy development" and what drives it in order to find ways to help re-imagine our energy future.

We have created opportunities within our research design to mobilize knowledge with numerous audiences including the general public, several levels of government, and civil society organizations. A representative from the Pembina Institute, a key civil society organization on this topic, is working with the project team at several key junctures. Also, as noted in the Knowledge Mobilization Plan, the citizen jury is positioned in Years 3 and 4 of the project to mobilize several streams of research and to invite citizens to interact with this material in thoughtful and meaningful ways. We intend to rely on this research method as a way to reach our target audiences.

RESEARCH TEAM, PREVIOUS OUTPUT AND STUDENT TRAINING

A. Description of the research team

John Parkins, Principal Investigator, is an Associate Professor in the Department of Resource Economics and Environmental Sociology, University of Alberta. Dr. Parkins has published extensively in two principal areas: the changing relationship between rural communities and natural resource economies, and deliberative approaches to environmental management and decision-making. He has recently completed a SSHRC SRG on forest communities in transition that has resulted in training 1 Masters student and 1 PhD student, along with 9 peer-reviewed publications and 10 other research contributions from this project. Dr. Parkins also received SSHRC funding in 2010 to host a scholarly workshop, resulting in an edited volume on ‘Social Transformation in Rural Canada’ -- to be published by UBC Press in 2012. Building on his leadership in these recent projects, Dr. Parkins will provide a major coordinating role in this project with attention to broader goals such as knowledge mobilization and the coordination of research within study sites. He will also provide leadership with research that is related to Objective 2 (*use Q methodology research to understand cultural values within each region*). This will involve direct supervision of 3 graduate students. Currently, Dr. Parkins has one other international research project (PI) and a smaller role in a SSHRC CURA (co-investigator). Therefore he will be spending approximately 40% of his allocated research time on this project.

Kate Sherren, Co-investigator, is an Assistant Professor in the School for Resource and Environmental Studies, Faculty of Management, Dalhousie University. She has published about multi-functional resource landscapes (including aesthetics) and environmental education in Australia, Canada and the United States. Dr. Sherren is an expert in landscape visualization and elicitation methods and will provide leadership with research that is related to Objective 1 (*use elicitation and visualization techniques to understand how individually held landscape values influence citizen responses to energy development*). This will involve direct supervision of three graduate students and shared synthesis activities for which Dr. Sherren expects to commit 50% of her allocated research time over the duration of the grant. A range of smaller grants and contracts in commensurate fields (agriculture, urban ecosystems, carbon capture and storage) will make up the balance.

Tom Beckley, Co-investigator, is a Professor in the Faculty of Forestry and Environmental Management, University of New Brunswick. Dr. Beckley has published extensively in areas such as social values in resource management, community forestry and public involvement in forest management. He was the environment theme leader for a major SSHRC project on the New Rural Economy (Reimer, PI) and he is well-known within the New Brunswick region and well beyond as a scholar, public advocate for alternative resource management strategies, and community development. Dr. Beckley will provide leadership with research that is related to Objective 3 (*facilitate citizen learning and deliberations toward identifying acceptable energy production and consumption alternatives*). Dr. Beckley will contribute approximately 30% of his research time on this project.

Richard Stedman, Collaborator, is an Associate Professor in the Department of Natural Resources, Cornell University. Dr. Stedman has extensive research experience in the areas of sustainable resource-dependent communities, social risk assessment, causes and consequences of land-use change, and socio-ecological factors that underlie attachment to place and foster subsequent environmental behavior. His expertise in place attachment research, survey research, and quantitative analysis is of particular benefit to this project, and Dr. Stedman will provide leadership on some aspects of Objective 2 (*Use survey research to gauge technical literacy related to energy development in Canada*). His current research portfolio involves several large projects related to energy development in the United States, so his involvement in this project will consist of approximately 10% of his research time.

Tim Weis, Collaborator, is the Director of Renewable Energy and Efficiency Policy, Pembina Institute. Dr. Weiss is a professional engineer and he specializes in clean energy policy design, research and strategic decision making. Dr. Weis is a tireless advocate for clean energy development and his involvement in this project signals a strong desire to work closely with civil society organizations, mobilize knowledge, draw on existing experience, and development detailed research questions and strategies that link directly to ongoing policy debates and energy development challenges in Canada. As a sounding board during critical stages in the development of this project, he will play an important role in project meetings and research events such as the citizen jury.

This research team has several advantages in achieving the ambitious objectives of this project. First, the team is multi-disciplinary with strong background in environmental studies, natural resource management, environmental sociology and human geography. Moreover, we bring expertise in a variety of social science research methods that will be utilized in this project. Second, several members of the team have a long history of working together (Parkins, Beckley and Stedman), resulting in collaborative academic output that is outlined below. Our new collaborators are productive scholars with commensurate interests (Sherren and Weiss). Third, this study contributes to ongoing and core areas of research for all team members. These ongoing research interests are discussed in the next section, with attention to how previous and ongoing research is extended through this proposed project.

B. Description of previous and ongoing research results

The description of previous and ongoing research results is organized by the three project objectives in order to show how previous and ongoing research is linked to this proposed research and to demonstrate how research is extended theoretically and empirically by this project.

Objective 1 - Use elicitation and visualization techniques to understand how individually held landscape values influence citizen responses to energy development

Kate Sherren, Tom Beckley and Richard Stedman have extensive experience in values elicitation and landscape visualization techniques. Based in Australia, Dr. Sherren's recent work examined interactions between farmer values, grazing activities, trees, and biodiversity (e.g., **Sherren, K.**, et al. in press. Lessons from visualising the landscape and habitat implications of tree decline -

and its remediation through tree planting - in Australia's grazing landscapes. *Landscape and Urban Planning*; **Sherren, K.**, et al., 2011. Using photography to elicit grazier values and management practices related to tree survival and recruitment. *Land Use Policy* 27, 1056-1067). Dr. Stedman and Dr. Beckley are also intimately acquainted with the value of photographic methods to explore connections between place attachment and landscape attributes (e.g., Matarrita-Cascante, D., R.C. **Stedman**, and A.E. Luloff. 2010. Permanent and seasonal residents. community attachment in natural amenity-rich areas: Exploring the contribution of landscape factors. *Environment and Behavior* 42: 197-220; **Beckley**, T.M., R.C. **Stedman**, S. Wallace, and M. Ambard. 2007. Snapshots of what matters most: Using resident employed photography to articulate sense of place. *Society and Natural Resources* 20:913-929.)

This recent and ongoing research connects closely with the objective in this proposed project to understand how individually held landscape values influence citizen responses to energy development. Under the leadership of Dr. Sherren, the research team will simulate feasible landscape scenarios for a range of energy sources indigenous to each case area. Through this project, they will maintain a program of research on theory and methods for elicitation and visualization that links landscape change, human behavior and land use decision making.

Objective 2 - Use Q methodology and survey research to understand cultural values and gauge technical literacy related to energy development in Canada

All members of the research team have extensive experience with survey research methods and the study of values that are associated with landscape activities and environmental behavior. In the last 2 years, Dr. Parkins has worked with colleagues in Alberta to explore the social, economic, and ethical dimensions of nuclear power development (Davidson, D., U. Chakravorty, J.R. **Parkins** and R. Haluza-Delay. 2010. Nuclear energy in Alberta: What you need to know. *Environment Research and Studies Centre*, University of Alberta. 48pp.; **Parkins**, J.R. and R. Haluza-Delay. 2011. Social and Ethical Considerations of Nuclear Power Development. *Department of Rural Economy Staff Paper #11-01*. University of Alberta. pp. 39.). Dr. Parkins is also familiar with Q-method as a way of eliciting distinct discourses that are related to environmental values and beliefs (Halter, G. and **Parkins**, J.R. 2011. Water Culture. Water culture and irrigation farming in Alberta: Some preliminary insights from Q research. LEARN Network Workshop, Banff Centre, Alberta.)

Beckley and Stedman and Sherren have ongoing research that draws on survey research to understand environmental values in different settings, with some of this work focused on energy development (e.g., Jacquet, J. and R. **Stedman**. 2011. Natural gas landowner coalitions in New York State: Emerging Benefits of Collective Natural Resource Management. *Journal of Rural Social Sciences*, 26(1), 2011, pp. 62–91; Huddart-Kennedy, E., T.M. **Beckley**, B.L. McFarlane, S. Nadeau. 2009. Why We Don't "Walk the Talk": Understanding the Environmental Values/Behaviour Gap in Canada. *Human Ecology Review*, 16(2), 151-160; **Sherren**, K., H-J. Yoon, H. Clayton, J. Schirmer. In review. Do Australian farmers have an offset mindset about their farm trees? *Biodiversity and Conservation*). This project will allow researchers to maintain long-term interests in the study of Canadian environmental values, with a focus on values that

are related to energy development. Dr. Beckley and Dr. Stedman will provide leadership in large-scale survey research and Dr. Parkins will provide leadership in local values elicitation through Q-method techniques.

Objective 3 - Facilitate citizen learning and deliberations toward identifying acceptable energy production and consumption alternatives

Research and practice in civic engagement is an area of strength for the project team. Dr. Parkins has ongoing interests in the linkages between deliberative democracy and environmental impact assessment (e.g., **Parkins, J.R.** Forthcoming. Deliberative democracy, institution building and the pragmatics of cumulative effects assessment. *Ecology & Society*; **Parkins, J.R.** and D.J. Davidson. 2008. Constructing the public sphere in compromised settings: A case study of environmental decision-making in the Alberta forest sector. *Canadian Review of Sociology*. 45(2): 177-196.) Dr. Parkins and Dr. Beckley have also worked closely together on topics of public participation in the forest sector, with several practice-oriented publications to improve the quality of civic engagement in the context of natural resource management (e.g., **Beckley, T.M. J.R. Parkins,** and S.R.J. Sheppard. 2006. Public participation in sustainable forest management: A reference guide to best practices. *Sustainable Forest Management Network*, Edmonton, AB). Dr. Sherren's Australian work engaged graziers and policy-makers early and often, and produced agricultural extension materials and schools curricula as well as scholarly output. Dr. Parkins is also a co-investigator on a SSHRC CURA called Alberta Climate Dialogue (Kahane, PI) that is seeking to enhance public dialogue on climate issues in Alberta through deliberative democratic techniques. There are strong connections between these projects and Dr. Parkins and Dr. Beckley will provide leadership in this area.

C. Description of proposed student training strategies

Student training is an integral component of this project, with the vast majority of student funding going directly to student stipends in three Canadian universities (Alberta, Dalhousie, UNB). In the budget justification, a table provides detail on project activities for graduate students. Three graduate students will work at Dalhousie University, with a focus on elicitation and visualization research in the AB and NB research sites, as well as citizen jury research in NB. Three graduate students will work at the University of Alberta, with a focus on Q-method research in the AB and NB research sites, as well as citizen jury research in AB. One graduate student will work at UNB, with a focus on national survey research. These students will work in close interaction with the project investigators, and their thesis research will focus on aspects of the project. To maintain integration across project objectives and research areas, project investigators will serve on respective graduate student committees. For instance, Dr. Stedman, and Dr. Sherren will serve on the UNB graduate student committee to provide oversight and leadership on the national survey research. SSHRC funds are also earmarked for student travel to field research sites and student travel to academic conference for dissemination and communication of research results. In addition to other academic output, at the end of this four year project, we expect to train 7 graduate students on social science theory and methods that are related to energy production in Canada.

Family name, Given name

Parkins, John

Funds Requested from SSHRC

For each budget year, estimate as accurately as possible the research costs that you are asking SSHRC to fund through a grant. For each Personnel costs category, enter the number of individuals to be hired and specify the total amount required. For each of the other categories, enter the total amount required.

Personnel costs	Year 1		Year 2		Year 3		Year 4		Year 5	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Student salaries and benefits/Stipends										
Undergraduate	1	15,000	1	15,000	0	0	0	0	0	0
Masters	4	44,400	4	73,200	3	37,200	3	51,600	0	0
Doctorate										
Non-student salaries and benefits/Stipends										
Postdoctoral										
Other										
Travel and subsistence costs										
	Year 1		Year 2		Year 3		Year 4		Year 5	
Applicant/Team member(s)										
Canadian travel	12,000		12,300		12,300		14,500		0	
Foreign travel	0		1,500		1,500		1,500		0	
Students										
Canadian travel	0		9,100		9,100		9,100		0	
Foreign travel										
Other expenses										
Professional/Technical services	1,700		0		0		1,700		0	
Supplies	800		0		0		2,000		0	
Non-disposable equipment										
Computer hardware	2,700		0		0		0		0	
Other	2,000		0		0		0		0	
Other expenses (specify)										
Citizen Jury	0		0		30,000		0		0	
National Survey	0		40,000		0		0		0	
Total	78,600		151,100		90,100		80,400		0	

BUDGET JUSTIFICATION

Personnel Costs

The Department of Resource Economics and Environmental Sociology, University of Alberta, has a graduate funding system where qualified students can receive a monthly stipend of approximately \$1800 for their first year of course work (September to April), at which time grant funds are used to pay for the remaining first year (May to August) and all of the second year of project-based thesis research.

The School for Resource and Environmental Studies at Dalhousie University aims to fund Masters students \$1250 per month for two years, and seeks the full amount from SSHRC. The school cannot guarantee any of those funds, although high achieving students (GPA above 3.7) may attract central funds, and students may be able to supplement with teaching assistantships.

University of New Brunswick, Faculty of Forestry and Environmental Management funds Masters students at \$1450 per month which includes baseline funding of \$15,000 per year and the graduate school provides some additional funding, usually to the tune of about \$2500 per student per year (though the amount varies) for up to two years for a masters student. These funding arrangements for graduate students within our respective institutions are reflected in the table below.

Funding Formula for Masters Students

U of A stipend = \$1800 per month for masters student \$21,600 per year
 Dalhousie stipend = \$1250 per month for masters student \$15,000 per year
 UNB stipend = \$1450 per month for masters students \$17,500 per year

Location	Year One	Year Two	Year Three	Year Four
University of Alberta (3 Masters Students)	<u>2 masters students</u> SSHRC \$14,400 U of A \$28,800	<u>2 masters students</u> SSHRC \$43,200 U of A \$0	<u>1 masters student</u> SSHRC \$7,200 U of A \$14,400	<u>1 masters student</u> SSHRC \$21,600 U of A \$0
Dalhousie University (3 Masters Students)	<u>2 masters students</u> SSHRC \$30,000 Dalhousie \$0	<u>2 masters students</u> SSHRC \$30,000 Dalhousie \$0	<u>1 masters students</u> SSHRC \$15,000 Dalhousie \$0	<u>1 masters students</u> SSHRC \$15,000 Dalhousie \$0
University of New Brunswick (1 RA and 1 Masters)	Research Assistant SSHRC \$15,000 UNB \$2500	Research Assistant SSHRC \$15,000 UNB \$2500	<u>1 masters student</u> SSHRC \$15,000 UNB \$2500	<u>1 masters student</u> SSHRC \$15,000 UNB \$2500

SSHRC to U of A (3 Masters Students) \$86,400

SSHRC to Dal (3 Masters Students) \$90,000

SSHRC to UNB (1 Masters Student and 1 RA) \$60,000

Project Activity Schedule for Masters Students and Research Assistant

Location	Year One	Year Two	Year Three	Year Four
University of Alberta	<u>2 masters students</u> Courses / Research AB – Q-method Courses / Research NB – Q-method	<u>2 masters students</u> Research (AB) / thesis writing Research (NB) / thesis writing	<u>1 masters student</u> Courses / Citizen Jury (AB)	<u>1 masters student</u> Citizen Jury (AB) / thesis writing
Dalhousie University	<u>2 masters students</u> Courses / Research AB – Viz/Elicit Courses / Research NB – Viz/Elicit	<u>2 masters students</u> Research (AB) / thesis writing Research (NB) / thesis writing	<u>1 masters students</u> Courses / Citizen Jury (NB)	<u>1 masters students</u> Citizen Jury (NB) / thesis writing
University of New Brunswick	<u>Research Assistant</u> NB - Viz/Elicit NB – Q-method	<u>Research Assistant</u> National survey research	<u>1 masters student</u> National survey research	<u>1 masters student</u> National survey research

Travel and subsistence costs Note: With all travel, savings from local travel (e.g., within Alberta) to compensate for more expensive travel distances, resulting in average travel costs for the research team.

Applicant / team members (Canadian and Foreign)

Travel for research

Year 1 - Project inception meetings in 2 case study communities

Alberta meeting: \$1200 X 3 investigators and 2 collaborators = \$6000

New Brunswick: \$1200 X 3 investigators and 2 collaborators = \$6000

Year 2 and 3 - Field research (approximately 1 week per visit)

Two AB visits per investigator (3) (travel \$900 and subsistence \$900) = \$10,800

Two NB visits per investigator (3) (travel \$900 and subsistence \$900) = \$10,800

Travel for communication

Conference travel: Two conferences (academic and practitioner) per investigator (three) at \$1500 per conference (one Foreign and one Canadian) = \$9000

Year 4 - Visit to research sites for communication and mobilization of project results

One AB visit per investigator (3) and collaborator (2) (travel \$900 and subsistence \$400) = \$6500

One AB visit per investigator (3) and collaborator (2) (travel \$900 and subsistence \$400) = \$6500

Student (Canadian and Foreign)

Research travel (Year 2, 3 and 4)

Masters student travel to study sites

Three AB site visits X three students (Visualization, Q-method, Citizen Jury) = \$3600

Three NB site visits X three students (Visualization, Q-method, Citizen Jury) = \$3600

Student subsistence costs during field research

Three AB site visits X three students (2 months X \$800 per student) = \$4800

Three NB site visits X three students (2 months X \$800 per student) = \$4800

Travel for communication (Year 2 and 4)

One conference per student at the end of their thesis program (7 students X \$1500) = \$10,500

Other expenses

Professional and technical services

Consulting services (\$850 per day) for expertise from Pembina Institute on energy policy development in Canada; 2 days for project inception meeting (Year 1) and 2 days for project communication and dissemination activities (Year 4) = \$3400

Supplies (software, document production, dissemination)

Funds are designated in year one for the purchase of software such as SPSS, NVivo and Adobe, this includes Photoshop software is designated to support field work and data collection (\$800).

A supplies fund is designated in year four for document production and dissemination to communities (\$2000).

Non-disposable equipment - Computer hardware (Year 1)

Three laptops for computer-intensive field research during visualization / elicitation, transcribing and factor analysis of Q-method data (3 X \$900) = \$2700

One workstation with large monitor for high-quality graphics work based at Dalhousie = \$1500

One Digital SLR camera for visualisation research in field research sites = \$500

Other expenses

Visualization / elicitation and Q-method research require no costs other than travel and accommodation for student research and project investigators

Citizen jury: Intensive, multi-day public deliberations have significant costs that relate to participant travel (approx. 12 participants), hosting, room rental, briefing materials, local advertising in NB and AB, \$15,000 in each location = \$30,000

National survey costs: Based on recent estimates, national survey conducted by polling firm, with national sampling and oversampling in project regions (AB and NB) that will contribute to citizen jury and public communication events in these regions (\$40,000).

Funds from Other Sources

You must include all other sources of funding for the proposed research. Indicate whether these funds have been confirmed or not. Where applicable, include (a) the partners' material contributions (e.g. cash and in-kind), and (b) funds you have requested from other sources for proposed research related to this application.

Full organization name Contribution type	Confirmed	Year 1 Year 5	Year 2	Year 3	Year 4
Cornell University	<input checked="" type="checkbox"/>	2,200	2,200	4,200	4,200
In Kind		0			
Dalhousie University	<input checked="" type="checkbox"/>	17,000	17,000	17,000	17,000
In Kind		0			
University of Alberta	<input checked="" type="checkbox"/>	17,600	17,600	17,600	17,600
In Kind		0			
University of Alberta	<input checked="" type="checkbox"/>	28,800	0	14,400	0
Cash		0			
University of New Brunswick	<input checked="" type="checkbox"/>	14,400	14,400	14,400	14,400
In Kind		0			
University of New Brunswick	<input checked="" type="checkbox"/>	2,500	2,500	2,500	2,500
Cash		0			
	<input type="checkbox"/>				
	<input type="checkbox"/>				
	<input type="checkbox"/>				
Total funds from other sources		82,500	53,700	70,100	55,700
		0			

Family name, Given name

Parkins, John

Suggested Assessors - List up to 3 Canadian or foreign specialists whom SSHRC may ask to assess your proposal. List keywords that best describe the assessor's areas of research expertise. Please refer to the Suggested Assessors section of the detailed instructions for more information on conflicts of interest.

Family name Einsiedel		Given name Edna		Initials F	Title Dr.
Org. code	Full organization name University of Calgary		Keywords public policy deliberation, science and technology studies		
Department/Division name Communication and Culture			Address University of Calgary		
Country code		Area code	Number	Extension	City/Municipality
Telephone number		1	403	220-3925	Calgary
Fax number		Prov./State AB			
E-mail		einsiede@ucalgary.ca			
Country code		Postal/Zip code T2N1N4			
Country		CANADA			
E-mail einsiede@ucalgary.ca					
Family name Sinclair		Given name Peter		Initials R	Title Dr.
Org. code	Full organization name Memorial University of Newfoundland		Keywords Energy development in Canada, Sociology, rural communities		
Department/Division name Sociology			Address Memorial University		
Country code		Area code	Number	Extension	City/Municipality
Telephone number		1	709	864-7457	St John's
Fax number		Prov./State NL			
E-mail		peters@mun.ca			
Country code		Postal/Zip code A1C5S7			
Country		CANADA			
E-mail peters@mun.ca					
Family name Hanna		Given name Kevin		Initials	Title Dr.
Org. code	Full organization name Wilfrid Laurier University		Keywords environmental impact assessment, rural community development,, regional planning		
Department/Division name Geography and Environmental Studies			Address 75 University Avenue West		
Country code		Area code	Number	Extension	City/Municipality
Telephone number		1	519	884-0710	Waterloo
Fax number		Prov./State ON			
E-mail		khanna@wlu.ca			
Country code		Postal/Zip code N2L3C5			
Country		CANADA			
E-mail khanna@wlu.ca					

Personal information will be stored in the Personal Information Bank for the appropriate program.

Application WEB

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Internal use	CID (if known)
650736	117803

Identification
Only the information in the Name section will be made available to selection committee members and external assessors. Citizenship and Statistical and Administrative Information will be used by SSHRC for administrative and statistical purposes only. Filling out the statistical and Administrative Information section is optional.

Name			
Family name	Given name	Initials	Title
Parkins	John	R	Dr.

Citizenship - Applicants and co-applicants must indicate their citizenship status by checking and answering the applicable questions.

Citizenship status	<input checked="" type="radio"/> Canadian	<input type="radio"/> Permanent resident since (yyyy/mm/dd)	<input type="radio"/> Other (country)	Have you applied for permanent residency?
		_____	_____	<input type="radio"/> Yes <input type="radio"/> No

Statistical and Administrative Information

Birth year	Gender	Permanent postal code in Canada (i.e. K2P1G4)	Correspondence language	Previous contact with SSHRC? (i.e. applicant, assessor, etc.)
1967	<input type="radio"/> F <input checked="" type="radio"/> M	T6G0V1	<input checked="" type="radio"/> English <input type="radio"/> French	<input type="radio"/> Yes <input checked="" type="radio"/> No

Full name used during previous contact, if different from above

Contact Information
The following information will help us to contact you more rapidly. Secondary information will not be released by SSHRC without your express consent.

Primary telephone number				Secondary telephone number			
Country code	Area code	Number	Extension	Country code	Area code	Number	Extension
	780	492-3610					
Primary fax number				Secondary fax number			
Country code	Area code	Number	Extension	Country code	Area code	Number	Extension
	780	492-0268					
Primary E-mail jparkins@ualberta.ca							
Secondary E-mail							

Personal information will be stored in the Personal Information Bank for the appropriate program.

Checked
Web CV
2011/10/12

Do not photocopy this page.

Family name, Given name

Parkins, John

Current Address Use only if you are not affiliated with a department at a Canadian university. (If you are affiliated with a department at a Canadian university, the department's mailing address will be used.) If you wish to use another address, specify it under the Correspondence Address.			Correspondence Address Complete this section if you wish your correspondence to be sent to an address other than your current address.		
Address 515 General Services Building			Address		
City/Municipality Edmonton			Prov. / State AB	Postal/Zip code T6G2H1	
Country CANADA			Country		
Temporary Address If providing a temporary address, phone number and/or E-mail, ensure that you enter the effective dates.			Permanent Address in CANADA		
Address			Address 11126 - 83 Ave		
City/Municipality			Prov./ State	Postal/Zip code	
				Edmonton AB T6G0V1	
Country			Country CANADA		
Start date (yyyy/mm/dd)	End date (yyyy/mm/dd)		Temporary telephone/fax number		
			Country code	Area code	Number Extension
Temporary E-mail					